REMARKS

Claims 36-80 are currently pending in the application. Claims 2-35 have been canceled without prejudice or disclaimer. New claims 36-80 have been added herein, support for which may be found at least in the originally filed claims, pp. 5-6 and 9-11 of the specification, and Figs. 1, 4 and 5, for example To assist the Examiner's review, Applicants respectfully point out that system claims 51-57 and article claims 66-72 substantially correspond to method claims 36-42. Also, system claims 58-65 and article claims 73-80 substantially correspond to method claims 43-50. Reconsideration of this application is respectfully requested.

Petition for Revival in view of Unintentional Abandonment

A Notice of Abandonment dated March 13, 2007 was received from the Office for this application for failure to reply to the Office Action of August 23, 2006. The Abandonment was unintentional. A Petition for Revival of An Application for Patent Abandoned Unintentionally Under 37 CFR 1.137(b) is submitted herewith along with the requisite fee (to be charged to Deposit Account No. 50-3062). Applicants respectfully request entry of this Amendment and favorable consideration.

Art Rejections

The Office Action includes a rejection of claims 2, 3, 9, 10, 13, 15, 16, 19, 21-23, 25-30, 32, 34 and 35 under 35 U.S.C. § 102(e) as allegedly being anticipated by U.S. Patent No. 6,189,002 issued to Roitblat *et al.* (hereinafter "Roitblat"). The Office Action also includes a rejection of claims 4, 5, 11, 12, 17, 18, 24 and 31 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Roitblat in view of U.S. Patent No. 6,327,574) (hereinafter "Kramer"). Claims 2-35 have been canceled, and these rejections are therefore moot. Remarks are

presented below explaining exemplary reasons why new claims 36-80 are patentable over the applied references.

Independent claim 36 recites a method for analyzing documents from a data source. The method comprises analyzing a reference corpus using a profile to determine reference corpus document scores indicative of content of documents in the reference corpus relative to the profile; identifying a particular reference corpus document score that corresponds to a particular delivery ratio of documents of the reference corpus based on the analysis of the reference corpus; assigning threshold scores to a multiplicity N of score threshold levels such that the particular reference corpus document score is assigned to be a threshold score for a given one of the N score threshold levels; analyzing a data source using the profile and determining raw document scores for documents from the data source relative to the profile based upon the analysis of the data source; comparing the raw document scores to the threshold scores of the N score threshold levels; assigning normalized document scores to documents of the data source based on the comparison of the raw document scores to the threshold scores of the N score threshold levels as indicators of document relevancy to the profile; and selecting a document based upon its normalized document score.

By way of a non-limiting example of the subject matter recited in claim 36, the Office is respectfully referred to pp. 10-11 of the present application, which illustrates a table of ten normalized scores ($\sigma = 0, 1, 2, \ldots, 9$) associated with ten score threshold levels for scoring documents relative to a profile. In this example, the ten score threshold levels further correspond to ten delivery ratios r_k for documents analyzed according to a first profile associated with a tag "sports" and further correspond to ten delivery ratios r'_k for documents analyzed according to a second profile associated with a tag "ice hockey." Such a scale of delivery ratios, for example, can be used as a scale of raw document scores for assigning corresponding normalized document scores for documents under analysis, as discussed in the

specification at pp. 9-11, for example. An actual raw document score for a given document can be compared to the scale of raw document scores, and based upon how the raw document score compares to the scale of raw document scores, a corresponding normalized document score can be assigned to a given document based upon the association of the scale of raw document scores to corresponding normalized document scores. Of course, claim 36 and associated claims are not limited to this example.

Independent claim 43, which contains recitations similar to those in claim 36, presents subject matter from the standpoint of assigning normalized document scores to documents based upon raw document scores for two or more profiles. As reflected in the last recitation of claim 43, a given document of the data source can then be classified as being relevant to at least one of the first profile and the second profile if at least one of the first normalized document score and the second normalized document score of the given document, respectively, satisfy a relevance threshold. As noted in the specification at pp. 8-9, for example, the use of normalized scores for different profiles facilitates analysis of document relevance across multiple profiles in a manner that is comparable across profiles. Such an approach facilitates multiple classification of documents according to multiple profiles. Of course, claim 42 and associated claims are not limited to the exemplary subject matter described in the specification.

In contrast, Neither Roitblat nor Kramer applied in the previous Office Action disclose the combinations of features recited in claims 36 or 43. In particular, the Office Action of August 23, 2006, relied substantially upon discussions in Roitblat relating to taking the dot product of a "query semantic profile" and a "document semantic profile" to assess relevance/similarity in profiles, where high dot products indicate high relatedness (see, e.g., col. 9, ll. 14-20; col. 6, ll. 12-18 of Roitblat). Notwithstanding the Office's contention that such a dot product of Roitblat corresponds to a document score for evaluating document

relevance, Applicants respectfully submit that Roitblat contains no disclosure or suggestion of various features recited in claim 36, including, for example:

> assigning threshold scores to a multiplicity N of score threshold levels such that the particular reference corpus document score is assigned to be a threshold score for a given one of the N score threshold levels;
>
> comparing the raw document scores to the threshold scores of the N score threshold levels;
>
> assigning normalized document scores to documents of the data source based on the comparison of the raw document scores to the threshold scores of the N score threshold levels as indicators of document relevancy to the profile; and
>
> selecting a document based upon its normalized document score.

It should be apparent that the dot product disclosed in Roitblat is, at most, just one type "score." In contrast, the subject matter of claim 36 requires two types of scores for any given document – a raw document score and a normalized score, where the normalized score is assigned based upon a comparison of the raw document score to a multiplicity of threshold scores associated with a multiplicity of threshold score levels. Roitblat contains no such disclosure. To the extent that Roitblat suggests that the dot product (or inner product) described therein is fundamentally already normalized (e.g., col. 6, lines 12-16 of Roitblat cited by the Office), it is still only one type of score – there is no disclosure in Roitblat of determining a raw document score and assigning a normalized document score based upon a comparison of the raw document score to a multiplicity of threshold scores associated with a multiplicity of threshold score levels.

Applicants note that the Office Action at p. 7 contains an allegation that Roitblat "does allow for the usage of alternative, well known statistical techniques for the normalization of vectors and scoring systems (col. 7, lines 25-27; col. 8, lines 11-16 and 48-55)." These sections do not disclose the claimed subject matter as described above, and in fact, are devoid of any discussion about normalization, and merely state:

> Two embodiments are described below in detail. Additional embodiments using alternative neural networks are also briefly mentioned. Roitblat, col. 7, lines 25-27;
>
> The identical transform can be accomplished using well-known statistical techniques. The network and statistical techniques differ only in the details of the algorithm by which the N principal components are computed, the results are identical. Roitblat, col. 8, lines 11-16;
>
> There are other techniques that can be used in place of principal components to project the high dimensional text vectors onto lower dimensional representations. These techniques are known in the statistical literature as matrix decomposition techniques. They differ somewhat in the constraints they place on the projected dimensions, but most of them would yield good results for information retrieval. Roitblat, col. 8, lines 48-55.

Accordingly, these sections clearly do not disclose the claimed subject matter relating to assigning a normalized document score based upon a comparison of the raw document score to a multiplicity of threshold scores associated with a multiplicity of threshold score levels.

Independent claim 43 recites features similar to those found in claim 36. Thus, similarly, Roitblat contains no disclosure of the combination of features recited in claim 43. Moreover, Roitblat contains no disclosure of determining raw document scores and normalized scores for documents using two or more profiles and classifying a given document as being relevant to at least one of those profiles if at least one of the normalized document scores satisfy a relevance threshold, as required by claim 43.

Thus, the subject matter recited in independent claims 36 and 43 is patentable over Roitblat for at least these reasons. Similarly, independent claims 51, 58, 73 and 78 are also patentable over Roitblat at least for similar reasons. The remaining claims are allowable at least by virtue of dependency.

The Office Action of August 23, 2006, also rejected dependent claims 4, 5, 11, 12, 17, 18, 24 and 31 as allegedly obvious in view of Roitblat and Kramer. Kramer was relied upon in the Office Action for allegedly disclosing a method and system of comparing

documents to topic profiles to determine closeness to topic by utilizing an exponential decay function scoring system. For reference to the alleged exponential decay scoring system, the Office cited col. 30, lines 8-10. Applicants, disagree with the Office's interpretation of Kramer. The cited section merely states the following:

> While a preferred embodiment uses Bayesian updating methods, updating of attribute vectors may be done with any variety of techniques, including exponential decay, wavelets, Gaussian combination, and the like. Kramer, col. 30, lines 8-10.

This section of Kramer contains no discussion relating to an exponential decay scoring system for scoring documents – rather, it deals with the updating of attribute vectors, which Kramer describes as being a hierarchy of vectors of a consumer profile such that the attribute vectors encode attributes of a consumer at progressively higher levels of abstraction (Abstract of Kramer). This section does not disclose what the Office contends it discloses, and certainly does not disclose assigning a normalized document score based upon a comparison of the raw document score to a multiplicity of threshold scores associated with a multiplicity of threshold score levels, as required all of present the independent claims. Applicants respectfully submit that Kramer does not make up for the deficiencies of Roitblat noted above.

The dependent claims also contain further distinguishable subject matter. For example, the Office has already indicated that the subject matter contained in prior claims 7, 14 and 20 (now claims 41, 48, 56, 63, 71 and 78) is allowable. Moreover, Roitblat contains no disclosure of assigning a first tag to the given document if the first normalized score satisfies a first relevance threshold and assigning a second tag to the given document if the second normalized score satisfies a second relevance threshold, and ranking the first and second tags according to relevance to the given document based upon the first normalized

score and the second normalized score, where the first and second tags are descriptive of content of the first and second profiles, respectively, as recited in claims 49, 64 and 79.

For at least the above-noted reasons, Applicants respectfully submit that the present claims are patentable over the applied references and are in condition for allowance. Withdrawal of the prior rejections and allowance of claims 36-80 are respectfully requested.

CONCLUSION

In light of the above, withdrawal of the rejections and allowance of the application are respectfully requested. Should any issues remain in connection herewith, the Examiner is invited to telephone the undersigned to discuss the same.

Respectfully submitted,

Date: May 8, 2007

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